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1.0. INTRODUCTION

Paved roads are crucial part of modern transportation infrastructure, providing a safe and efficient means of travel for millions of people around the world. However, paved roads are not immune to degradation, and if left unchecked, a lead safety hazards, increased maintenance costs, and environmental damage. This report focuses on the maintenance of paved roads, with a specific emphasis on the identification and treatment of common degradations.

1.1. DEFINITION

Paved road maintenance refers to the routine and periodic activities performed to preserve and extend the lifespan of paved roads. These activities include inspections, repairs, and rehabilitation of the road surface, as well as the maintenance of associated infrastructure such as drainage systems and signage.

1.2. DESCRIPTION OF THE ROAD

The road in question starts from **CONGELCAM to PALA-PALA FIELD**, an urban area. The road stretches for approximately **1km and 50 metres.** The road is constructed of **asphalt (bituminous concrete)** and has a 2 lane configuration.

1.3. ROAD MAINTENANE CARRIED OUT FROM CONGELCAM TO PALA-PALA FIELD

REGION: South West Region

Location: Buea

Interval = 50.00m

Pk start	Pk End	degradation	Location on the road		length (m)	width (m)	depth (m)	surf m²	volume m³	Observation
			Left	Right						
0+8.00	0+12.00	Pothole	✓		4.00	8.00	0.1	32.00	3.20	
1+8.40	1+8.50	Spattering	✓	✓	0.10	8.00	0.3	0.80	0.24	
2+6.00	2+27.00	Pothole	✓	✓	20.00	8.00	0.3	160.00	48.00	
3+0.00	3+26.40	Pothole	✓	✓	26.40	8.00	0.3	211.20	63.36	
4+9.50	4+16.60	Rutting	✓	✓	7.10	8.00	0.3	56.80	17.04	
5+25.40	5+50.00	Pothole		✓	24.60	8.00	0.2	196.80	39.36	
6+0.00	6+50.00	Pothole		✓	50.00	8.00	0.2	400.00	80.00	
7+0.00	7+23.60	Pothole	✓	✓	23.60	8.00	0.2	188.80	37.76	
8+16.17	8+50.00	Spattering	✓	✓	33.83	8.00	0.3	270.64	81.19	
9+18.00	9+27.85	Spattering	✓	✓	9.85	8.00	2	78.80	157.60	
10+29.70	10+50.00	Pothole	✓	✓	20.30	8.00	0.2	162.40	32.48	
11+0.00	11+21.52	Pothole	✓	✓	21.52	8.00	0.2	172.16	34.43	
14+5.42	14+11.16	Pothole	✓	✓	5.74	8.00	0.3	45.92	13.78	
15+47.00	15+50.00	Pothole	✓	✓	3.00	8.00	0.3	24.00	7.20	
16+33.75	16+38.75	deformations	✓	✓	5.00	8.00	0.3	40.00	12.00	
17+0.00	17+50.00	deformations	✓	✓	50.00	8.00	0.3	400.00	120.00	
18+0.00	18+50.00	deformations	✓	✓	50.00	8.00	0.3	400.00	120.00	
19+0.00	19+50.00	Pothole	✓	✓	50.00	8.00	0.3	400.00	120.00	
20+0.00	20+50.00	Pothole	✓	✓	50.00	8.00	0.3	400.00	120.00	
Total Volume									**1,116.04**	

1.4. DEGRADATIONS AND THEIR LOCATIONS

1.4.1. Potholes

Reperage		Dimensions			Quantity		Observation
Pk début	Pk fin	length (m)	width(m)	depth (m)	surf (m^2)	volume (m^3)	
0+8.00	0+12.00	4.00	8.00	0.1	32.00	3.200	
2+6.00	2+27.00	20.00	8.00	0.3	160.00	48.000	
3+0.00	3+26.40	26.40	8.00	0.3	211.20	63.360	
5+25.40	5+50.00	24.60	8.00	0.2	196.80	39.360	
6+0.00	6+50.00	50.00	8.00	0.2	400.00	80.000	
7+0.00	7+23.60	23.60	8.00	0.2	188.80	37.760	
10+29.70	10+50.00	20.30	8.00	0.2	162.40	32.480	
11+0.00	11+21.52	21.52	8.00	0.2	172.16	34.432	
14+5.42	14+11.16	5.74	8.00	0.3	45.92	13.776	
15+47.00	15+50.00	3.00	8.00	0.3	24.00	7.200	
19+0.00	19+50.00	50.00	8.00	0.3	400.00	120.000	
20+0.00	20+50.00	50.00	8.00	0.3	400.00	120.000	
TOTAL						**599.568**	

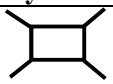
1.4.2. Spattering

Reperage		Dimensions			Quantity		Observation
Pk début	Pk fin	length (m)	width(m)	depth (m)	surf (m^2)	volume (m^3)	
1+8.40	1+8.50	0.10	8.00	0.3	0.80	0.240	
8+12.59	8+16.17	3.50	8.00	0.3	28.00	8.400	
8+16.17	8+50.00	33.83	8.00	0.3	270.64	81.190	
9+18.00	9+27.85	9.85	8.00	2	78.80	157.600	
TOTAL						**247.430**	

1.4.3. Cracks

Reperage		Dimensions			Quantity		Observation
Pk début	**Pk fin**	**length (m)**	**width(m)**	**depth (m)**	**surf (m^2)**	**volume (m^3)**	
16+33.75	16+38.75	5.00	8.00	0.3	40.00	12.000	
17+0.00	17+50.00	50.00	8.00	0.3	400.00	120.000	
18+0.00	18+50.00	50.00	8.00	0.3	400.00	120.000	
TOTAL						252.000	

1.5. OTHER ELEMENTS FOUNDED ON THE ROAD

Pk start	Pk End	Name	Symbol	L(m)	W(m)	Sur(m^2)	observation
8+12.59	8+16.17	Bridge		3.50	8.00	28.00	
-	-	Gutter		1050	0.60	630	Only on the right side of the road

1.6. DEGRADATIONS, CAUSES AND TREATMENTS

Paved roads are susceptible to variety of degradations. They include;

1.6.1. Cracks

Causes:

- Temperature fluctuations,
- Traffic loading, and
- Poor construction practices

Treatments

- Crack sealing
- Crack filling
- Overlaying.

Fig 1.0. Cracks on paved road

1.6.2. Potholes

Causes:

- Water infiltration
- Traffic loading
- Poor drainage

Treatments:

- Potholes repair
- Patching
- Resurfacing

Fig 1.1. Potholes on paved road

Fig 1.2. Potholes on paved road

1.6.3. Rutting

It is a transversal deterioration which produces in the v-profile treads and who is interested generally of great lengths

Fig 1.3. Rutting on paved road

Causes

- Traffic loading
- Poor drainage
- Inadequate pavement design

Treatments

- Resurfacing
- Overlaying
- Surface treatment

1.6.4. Spattering:

This breaks the coating at the banks. These degradations appear under the combined effect of a width insufficient coated strip and erosion of the shoulders causing the banks to be tilted.

Fig 1.4. Spattering on paved road

Causes

- Traffic loading
- Poor drainage
- Inadequate pavement design

Treatments

- Resurfacing of the shoulders
- Resurfacing of the wearing course

1.6.5. Flache

It is a generally rounded depression that occurs on the surface of the road surface.

Fig 1.5. Flache on paved road

Causes

- Poor material
- Poor compaction

Treatments

- Good compaction

1.7. CONCLUSION

Paved road maintenance is a critical activity that helps to ensure the safety, efficiency, and sustainability of transportation infrastructure. By identifying and treating common degradations, road authorities can extend the lifespan of paved roads, reduce maintenance costs, and minimize environmental impacts. Regular inspections, timely repairs, and effective maintenance strategies are essential for maintaining paved roads in good condition.